

CV2

AGE, DEMENTIA, AND EVIDENCE-BASED MEDICATION USE AFTER ADMISSION FOR ACUTE CORONARY SYNDROME

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OBJECTIVES: To assess the impact of dementia on evidence-based medication use after admission for patients with acute coronary syndrome (ACS) across different age groups. **METHODS:** Of 87,298 patients hospitalized for ACS between January 1, 2006 and December 31, 2007, 1835 patients with dementia and 3670 matched patients without dementia (1:2 ratio, matched by age, gender, and admitted hospital level) were identified from Taiwan's National Health Insurance Research Database. Use of evidence-based medications post-discharge were compared between patients with and without dementia across different age groups (≤ 65 , 66–75, 76–85, > 85). Multivariate logistic regression models were performed to examine the impact of dementia on use of evidence-based medications. **RESULTS:** Overall, dementia was associated with a 22% lower likelihood of use of evidence-based medications (adjusted odds ratio (OR) = 0.78, CI=0.68–0.89) in ACS patients. The use of evidence-based medications decreased with age, and dementia worsened the utilization. The proportions of patients receiving evidence-based medications were 85.6% (without dementia) versus 73.6% (with dementia) in the youngest age group and 62.0% (without dementia) versus 55.6% (with dementia) in the oldest age group. **CONCLUSIONS:** Dementia and aging were associated with the use of evidence-based medications in ACS patients.

CV3

REAL-WORLD CHARACTERIZATION OF HYPERTENSION PATIENTS IN JAPAN: A 1-YEAR OVERVIEW

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OBJECTIVES: To characterize the real-world profile of hypertension patients in Japan and their treatments, BP control, and health care resource consumption with a primary focus on isolated systolic hypertension (ISH) and the elderly patient population. **METHODS:** Data were extracted from insurance claims and from annual health examination. Only subjects who had blood pressure readings from their annual health examinations in 2009 and 2010 at 10–14 months apart were included. Subjects were identified by ICD-10-CM. Treatments were evaluated to understand the current distributions with a focus on 65+ versus <65 years of age. Control rates were calculated and costs evaluated by hypertension type. **RESULTS:** A total of 9269 subjects were identified with a hypertension diagnosis and annual health exam blood pressure readings. Subjects mean age was 51.61(9.54) years old, 72.6% were male, and were diagnosed for 3.72(3.95) years. 56.24% were currently controlled and 15.48% had ISH. Poly-pharmacy for hypertension was common (42.49%). ARBs (47.68%) and CCBs (28.26%) were used most frequently. The number of treatments subjects received increased with the number of years diagnosed, with an average of 1.23 medications within the first year and 2.45 after 10 years. For subjects controlled at baseline, 21.6% reverted to “uncontrolled” 1-year later and 47.9% ISH subjects improved “to-goal”. The average cost of treating subjects significantly differed over one year: JPY231,626.32 for “controlled” subjects, JPY230,989.37 for ISH and isolated diastolic subjects were least expensive at JPY141,739.55. Elderly had a significantly higher cost than subjects less than 65-year-old (JPY266,771.28 vs JPY213,091.42). **CONCLUSIONS:** Hypertension in Japan is characterized by poly-pharmacy and only moderate control. Elderly patients are significantly more costly to treat and “controlled” and ISH patients were the most costly to treat. Treatment was dominated by ARBs and CCBs (alone or in combination with other treatments).

CV4

ASSOCIATION BETWEEN KNOWLEDGE AND HEALTH RELATED QUALITY OF LIFE? IS PATIENT EDUCATION ALWAYS BENEFICIAL?

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OBJECTIVES: To evaluate association between HRQoL and knowledge among hypertensive population of Pakistan. **METHODS:** A cross sectional descriptive study was undertaken with a representative cohort of hypertension patients. Using prevalence based sampling technique, a total of 385 hypertensive patients were selected from two public hospitals of Quetta city, Pakistan. Hypertension Fact Questionnaire (HFQ) and European Quality of Life scale (EQ-5D) were used for data collection. SPSS v 16.0 was used to compute descriptive analysis of patients' demographic and disease related information. Categorical variables were described as percentages while continuous variables were expressed as mean \pm standard deviation (SD). Spearman's rho co-relation was used to identify the association between study variables. **RESULTS:** The mean (\pm SD) age of the patients was 39.02 \pm (6.59), with 68.8% males (n=265). The mean (\pm SD) duration of hypertension was 3.01 \pm 0.93 years. Forty percent (n=154) had bachelor degree with 34.8% (n=134) working in private sector. Almost forty one percent (n=140) had monthly income of more than 15000 Pakistan rupees (Pk Rs) per month (1 Pk Rs=0.01172 US\$) with 75.1% (n=289) having urban residency. The mean EQ-5D descriptive score (0.46 \pm 0.28) and EQ-VAS score (63.97 \pm 6.62) indicated lower HRQoL in our study participants. Mean knowledge score was 8.03 \pm 0.42. Correlation coefficient between HRQoL and knowledge was 0.208 (p< 0.001), indicating a weak positive association. **CONCLUSIONS:** Results of this study highlight hypertension knowledge to be weakly associated with HRQoL suggesting that imparting knowledge to patients do not necessarily improve HRQoL. More attention should be given to identify individualized factors affecting HRQoL.

PODIUM SESSION II:

HEALTH CARE EXPENDITURES STUDIES

EX1

THE EFFECTS OF POLYPHARMACY ON HEALTH CARE COSTS AND HOSPITAL ADMISSIONS IN THAI ELDERLY POPULATION: MULTIVARIATE TWO-PART MODELS

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OBJECTIVES: Polypharmacy is a widely known risk factor for adverse drug reactions, drug-drug interactions, and low adherence in the elderly population. There remains a paucity of evidence demonstrating its effect on hospital admissions and costs. This study aims to determine the effects of polypharmacy on hospital admissions and hospital costs among older patients in Thailand. **METHODS:** A retrospective cohort study was conducted using an electronic patient database in a provincial hospital of Thailand. All patients aged 60 years or older with at least 2 visits during 2009 were included. Exposure of interest is polypharmacy and excessive polypharmacy which were defined as dispensed medications for more than five and ten items, respectively. Outcomes of interest are hospital admissions and hospitalization costs incurred after index date of polypharmacy. We performed two-part model and used poisson regression and log-transformed linear regression with Duan's smearing estimator to determine the effects of polypharmacy on hospital admissions rate and hospitalization costs, respectively. All analyses were adjusted for potential confounders and propensity score. **RESULTS:** A total of 17,787 elderly patients were included. The mean age was 71 years with 57% female. Forty-two and 12 percent of patients received polypharmacy and excessive polypharmacy, respectively. Excessive polypharmacy was significantly associated with increased risk of admission (adjusted incidence rate ratio (IRR): 3.2 (95% CI: 1.1–5.4)) while only increased trend of admission was found among polypharmacy (IRR: 1.5 (95% CI: 0.9–2.1)). Hospitalization costs were significantly higher at \$135 (95% CI: 111.0 – 159.0) and \$25.0 (95% CI: 16.1 – 38.0) for excessive polypharmacy and polypharmacy, compared with non-polypharmacy. **CONCLUSIONS:** Both polypharmacy and excessive polypharmacy have significantly elevated health care costs but only excessive polypharmacy is significantly associated with increased risk of hospital admission. These findings demonstrated the detrimental effects of polypharmacy and highlighted the importance of finding measures to reduce polypharmacy.

EX2

AN OBSERVATION ON THE TREND OF OUTPATIENT CLINIC UTILIZATION AND NUMBERS OF MEDICAL PRESCRIPTION GIVEN IN TAIWAN ELDERLY BETWEEN 1997 AND 2010

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OBJECTIVES: To know the changes of outpatient clinic utilization and the prescription numbers per each outpatient clinic visit. **METHODS:** This study use Longitudinal Health Insurance Database (LHID) 2005 from the National Health Insurance Research Database, it contains 1 million random samples of year 2005 Registry. There are approximately 25.68 million individuals in this registry. The study subjects were the elderly over 65 years old in each year. We had reviewed the prevalence of outpatient clinic visit during the year, average outpatient clinic visit per year, medicine prescription in outpatient clinic of our study subjects. (grouped as numbers of item prescribed; zero, one to four, five to nine and above ten items). **RESULTS:** The total numbers of study subjects in each year increase from 52,672 in 1997 to 108,444 in 2010. Most of the elderly had utilized outpatient clinic, and the percentage of clinic utilization during these years had been in a rise every year. (93.4% in 1997 versus 96.8% in 2010). For those who had utilized at least one time outpatient clinic resources, the average outpatient visit numbers in this study ranges from 25.6 to 31.3 times/person-year during the period. However, numbers of prescription in each visit had decreased gradually. In 1997, the percentages of no items prescribed, 1–4 items, 5–9 items and more than 10 items prescribed were 50.1%, 28.39%, 20.07% and 1.42% respectively. In 2010, however, the percentages were 53.4%, 33.54%, 12.3% and 0.79% respectively. **CONCLUSIONS:** The prescription numbers had decreased gradually in the study period. The utilization percentage of outpatient clinic, however, was on a rise. In addition, multiple prescriptions (more than 5 items) was quiet common in our study, medical care givers should pay more attention on the issue of multiple prescription of our elderly.

EX3

A EVALUATION OF THE EFFECTS FROM CHINA DRUG POLICY REFORM DURING 2009-2011: SOME SUCCESS, MANY UNINTENDED EFFECTS

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OBJECTIVES: Many drug policies were implemented during 2009-2011 in China in order to lower the health cost burden from drug over-consumption and over-pricing. The effects of these policies have been intensively debated at the turn of 2012 in the mainstream media, albeit in the absence of comprehensive official statistics. The aim of this research is to assess the outcome of the drug policy reform during 2009-2011, based on the available publications. **METHODS:** Drug policies issued 2009-2011 by central government were identified and grouped into mutually exclusive categories, based on their main targets. All relevant news reports published in mainstream Chinese digital news portals from December 2011 to March 2012 were gathered and analysed by health policy trained analyst familiar with Chinese